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Title: **JP2000106209A2: NONAQUEOUS ELECTROLYTE AND NONAQUEOUS ELECTROLYTE SECONDARY BATTERY**

Country: **JP Japan**

Kind: **A2 Document Laid open to Public inspection**

Inventor: **HAYASHI TAKASHI;
TAN HIROAKI;**

Assignee: **MITSUI CHEMICALS INC**
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Published / Filed: **April 11, 2000 / Sept. 30, 1998**

Application Number: **JP1998000278262**

IPC Code: **H01M 10/40;**

Priority Number: **Sept. 30, 1998 JP1998000278262**

Abstract:

PROBLEM TO BE SOLVED: To provide a nonaqueous electrolyte which is superior in safety and in battery characteristics by constituting with a nonaqueous solvent containing a fluorine-containing aromatic compound, and an electrolyte.

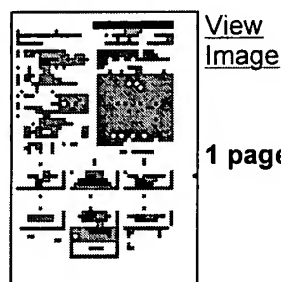
SOLUTION: A fluorine-containing aromatic compound is a compound represented by the formula I. In the formula, X is a 1-10C hydrocarbon group or a 0-10C group containing at least one of an oxygen atom, a sulfur atom, a nitrogen atom, and a phosphorous atom, or a chlorine atom, a bromine atom, an iodine atom, and Y is 1-5C fluorine-containing hydrocarbon group containing at least one fluorine atom, n=1-5, m=0-3, and m+n≤6. A nonaqueous solvent preferably contains a cyclic carbonate containing a 2-5C alkylene group and/or chain carbonate containing a 1-5C hydrocarbon group. For example, ethylene carbonate and dimethyl carbonate are listed. An electrolyte is preferably to be one selected from among LiPF₆, LiBF₄, LiOSO₂, and compounds of the formula II, formula III, and formula IV (R1-8 are a 1-6C perfluoroalkyl group). The nonaqueous electrolyte containing the nonaqueous solvent has low reactivity with a positive electrode.

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Family: **None**

Other Abstract: **None**

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(11) Publication number: **2000106209 A**

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PATENT ABSTRACTS OF JAPAN(21) Application number: **10278262**(51) Intl. Cl.: **H01M 10/40**(22) Application date: **30.09.98**

(30) Priority: (43) Date of application publication: 11.04.00 (84) Designated contracting states:	(71) Applicant: MITSUI CHEMICALS INC (72) Inventor: HAYASHI TAKASHI TAN HIROAKI (74) Representative:
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**(54) NONAQUEOUS
ELECTROLYTE AND
NONAQUEOUS
ELECTROLYTE
SECONDARY BATTERY**

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a nonaqueous electrolyte which is superior in safety and in battery characteristics by constituting with a nonaqueous solvent containing a fluorine-containing aromatic compound, and an electrolyte.

SOLUTION: A fluorine-containing aromatic compound is a compound represented by the formula I. In the formula, X is a 1-10C hydrocarbon group or a 0-10C group containing at least one of an oxygen atom, a sulfur atom, a nitrogen atom, and a phosphorous atom, or a chlorine atom, a bromine atom, an iodine atom, and Y is 1-5C fluorine-containing hydrocarbon group containing at least one fluorine atom, $n=1-5$, $m=0-3$, and $m+n \leq 6$. A nonaqueous solvent preferably contains a cyclic carbonate containing a 2-5C alkylene group

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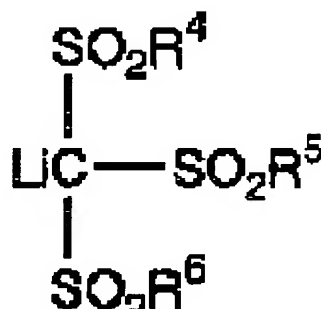
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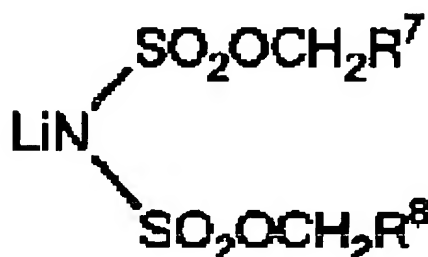
I



II



III



IV